

AMENDMENTS TO THE CLAIMS

Please amend claims 31 and 40, add new claims 49-52, and cancel claims 1-30, 32 and 41, as shown below. A complete listing of the claims, including their current status, is provided below:

1-30. **(Cancelled)**

31. **(Currently Amended)** A process for preparing a solid support capable of adsorbing a biomolecule, comprising:

(a) providing a solid support comprising a surface coating having a surface reactive site hydroxyl, carboxyl, amino or thiol group;

(b) contacting the surface coating with a plurality of monomers; and

(c) polymerizing said monomers to produce a solid support having a surface tethered polymer covalently linked to said surface coating, said surface tethered polymer having at least one adsorbing moiety for adsorbing a biomolecule.

32. **(Cancelled)**

33. **(Previously Presented)** The process of claim 31, wherein a portion of said biomolecule is an linking moiety.

34. **(Original)** The process of claim 31, wherein said polymer is substantially linear.

35. **(Original)** The process of claim 31, wherein said polymer is a vinyl polymer.

36. **(Previously Presented)** The process of claim 31, wherein said adsorbing moiety is an amine group.

37. **(Original)** The process of claim 35, wherein said vinyl polymer is a poly-(vinylamine).

38. **(Original)** The process of claim 31, wherein said biomolecule comprises an oligonucleotide or polynucleotide.

39. **(Previously Presented)** The process of claim 31, further comprising polymerizing an additional non-nucleotidic polymer tethered to said surface coating, said non-nucleotidic polymer comprising additional adsorbing moieties for adsorbing additional biomolecules.

40. **(Currently Amended)** A process for preparing a solid support containing a probe biomolecule capable of hybridization to a target species, comprising:

(a) providing a solid support comprising a surface coating having surface reactive site hydroxyl, carboxyl, amino or thiol group,

(b) contacting the surface coating with a plurality of monomers; and

(c) polymerizing said monomers to produce a solid support having a surface tethered polymer covalently linked to said surface coating, said surface tethered polymer having adsorbing sites for adsorbing biomolecules, wherein said surface tethered polymer is capable of assuming a plurality of conformations and exhibits sufficient mobility and flexibility such that the number of biomolecules adsorbed by the adsorbing moieties is maximized; and

(d) contacting the surface tethered polymer with the probe biomolecule.

41. **(Cancelled)**

42. **(Previously Presented)** The process of claim 40, wherein a portion of said biomolecule is an linking moiety.

43. **(Original)** The process of claim 40, wherein said polymer backbone is substantially linear.

44. **(Original)** The process of claim 40, wherein said polymer is a vinyl polymer.

45. **(Original)** The process of claim 40, wherein said adsorbing moieties are amine groups.

46. **(Original)** The process of claim 42, wherein said vinyl polymer is a poly-(vinylamine).

47. **(Previously Presented)** The process of claim 40, wherein said biomolecule comprises an oligonucleotide or polynucleotide.

48. **(Previously Presented)** The process of claim 40, further comprising polymerizing an additional non-nucleotidic polymer tethered to said surface coating, said non-nucleotidic polymer comprising additional adsorbing moieties adapted to adsorb an additional biomolecule.

49. **(New)** A process for preparing a solid support capable of adsorbing a biomolecule, comprising:

(a) providing a solid support comprising a surface coating having a surface reactive site;

(b) contacting the surface coating with a homogeneous mixture of vinyl monomers; and,

(c) polymerizing said monomers to produce a solid support having a surface tethered vinyl polymer covalently linked to said surface coating, said surface tethered vinyl polymer having at least one adsorbing moiety for adsorbing a biomolecule.

50. **(New)** The process of claim 49, wherein said surface reactive site is a hydroxyl, carboxyl, amino or thiol group.

51. **(New)** The process of claim 49, wherein said polymerization is done in the presence of cerium.

52. **(New)** The process of claim 49, wherein said vinyl polymer is a poly-(vinylamine).